



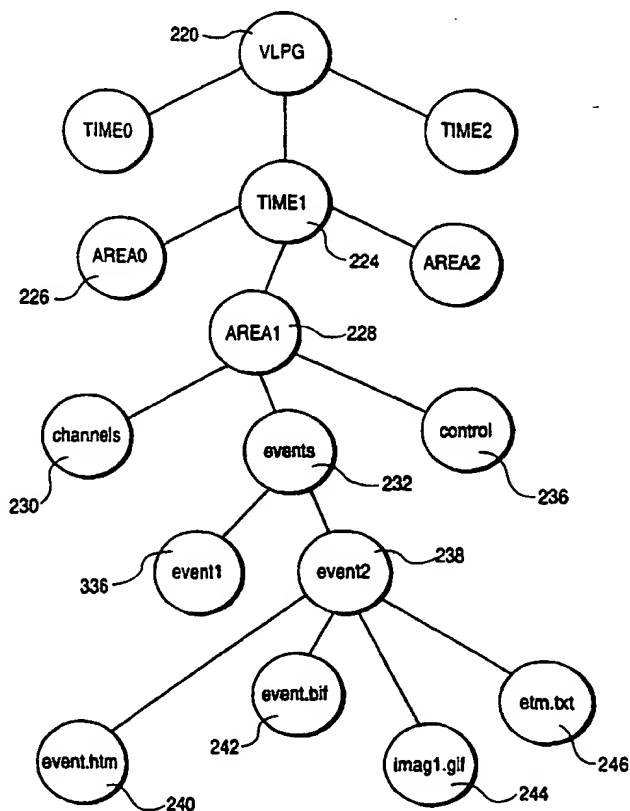
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04N 7/16		A1	(11) International Publication Number: WO 99/43158
			(43) International Publication Date: 26 August 1999 (26.08.99)
(21) International Application Number: PCT/US99/03511		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 18 February 1999 (18.02.99)			
(30) Priority Data: 60/075,412 20 February 1998 (20.02.98) US			
(71) Applicant (for all designated States except US): THOMSON CONSUMER ELECTRONICS, INC. [US/US]; 10330 North Meridian Street, Indianapolis, IN 46290 (US).			
(72) Inventors; and (75) Inventors/Applicants (for US only): OZKAN, Mehmet, Kemal [TR/TR]; Savasci Sok. Bozokatt 19/1, Avcilar, 34840 Istanbul (TR). TENG, Chia-Yuan [-/US]; 7384 Celata Lane, San Diego, CA 92129 (US). HEREDIA, Edwin, Arturo [BO/US]; Apartment 4015, 8274 Lakeshore Circle, Indianapolis, IN 46250 (US).		Published With international search report.	
(74) Agents: TRIPOLI, Joseph, S. et al.; Thomson Multimedia Licensing Incorporated, P.O. Box 5312, Princeton, NJ 08540 (US).			

(54) Title: A MULTIMEDIA SYSTEM FOR PROCESSING PROGRAM GUIDES AND ASSOCIATED MULTIMEDIA OBJECTS

(57) Abstract

A program guide information data structure and processing system facilitates both decoding and selectable program guide generation by a decoder. A decoder acquires a directory of object files associated with program guide information items and a map for associating the object files (e.g. representing channel, program or control information or software) with the program guide information items. The decoder creates an image object from an object file and links the image object to a program guide information item. The decoder executes an application software object to form a special program guide for display and executes another application software object to command a device in processing a program listed in a program guide.



FOR THE PURPOSES OF INFORMATION ONLY

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ART 34 Amdt

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5 What is claimed is:

1. Apparatus for decoding packetized program data from at least a first source to provide a program guide, comprising:

10 a processor for acquiring program guide information and for acquiring ancillary information in said packetized program data, said ancillary information including,

(a) a directory of object files associated with program guide information items, and

15 (b) a map for associating said object files with said program guide information items;

a processor for creating an image object from an object file and linking said image object to a program guide information item; and

20 a display processor for forming a composite image including said image object and said program guide information item to provide a program guide for display.

2. Apparatus according to claim 1, wherein

25 said directory of object files lists a file associated with at least one of (a) a broadcast program, (b) a broadcast channel and (c) User interface controls.

3. Apparatus according to claim 1, wherein

30 an object comprises at least one of (a) a video segment, (b) an audio segment, (c) text, (d) an icon representing a user selectable item for display, (e) an HTML or SGML document (f) a menu of selectable items, (g) an image window for presentation within an encompassing image, and (h) an image window for
35 initiating a multimedia function.

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5 4. Apparatus according to claim 1, wherein
 said ancillary information further includes acquisition
 information for use in acquiring said ancillary information from a
 second source different to said first source, and
 said acquisition information includes one of (a) an
10 Internet URL, (b) an Internet IP address, (c) an Email address, and
 (d) a telephone/fax/videophone number.

 5. Apparatus according to claim 1, wherein
 said display processor provides said program guide for
15 display in response to a User selection input command selecting
 between available program guides.

 6. Apparatus according to claim 1, wherein
 said ancillary information includes an object
20 complexity level indicator, and
 said apparatus disregards objects of complexity level
 exceeding a predetermined level.

 7. Apparatus for decoding packetized program data
25 from at least a first source to provide a program guide,
 comprising:

 a processor for acquiring program guide information in
 said packetized program data and for acquiring ancillary
 information, said ancillary information including,
30 (a) application software for use in processing
 acquired program guide information, and
 (b) a directory for associating said application
 software with a program guide information item to be processed;
 a processor for executing said application software to
35 process said program guide information item in forming a
 program guide for display; and
 a display processor for conditioning said formed
 program guide information for display.

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- 5 8. Apparatus according to claim 7, wherein
 said application software comprises at least one of, (a)
 an HTML or SGML file, (b) a Java™ file, (c) an ActiveX™ file and (d)
 a decoder supported software language file.
- 10 9. Apparatus according to claim 7, wherein
 said processor executes said application software to
 create a program guide for display.
10. Apparatus according to claim 9, wherein
15 said processor creates a special program guide for
 display and said special program guide includes a list of programs
 collated based on at least one of (a) a particular period of program
 broadcast, and (b) a particular category of programs.
- 20 11. Apparatus according to claim 10, wherein
 said particular category of programs includes
 programs with, at least one of, (a) a particular theme or topic, (b)
 particular actors or directors, (c) particular User defined criteria.
- 25 12. Apparatus according to claim 9, wherein
 said processor creates a special program guide from
 one or more of, (a) program guide information acquired from a
 broadcast source, and (b) program guide information acquired via
 the Internet.
- 30 13. Apparatus according to claim 9, wherein
 said processor creates a special program guide
 comprising multimedia services listing one or more of, (a) a
 DVD/VCR program available for play, (b) an Internet web site, (c)
35 a pre-stored fax/phone number for access, (d) a videophone
 service access item (e) a home appliance control function.

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5 14. Apparatus according to claim 12, wherein
 in creating a special program guide, said processor
 acquires program guide information by establishing bi-directional
 communication with a second source using acquisition information
 including one of (a) an Internet URL, (b) an Internet IP address,
10 (c) an Email address, and (d) a telephone/fax/videophone number.

 15. Apparatus according to claim 7, wherein
 said application software comprises an object file
 associated with at least one of (a) a broadcast program, (b) a
15 broadcast channel and (c) User interface controls.

 16. Apparatus according to claim 7, wherein
 said processor executes said application software to
 create a User selected program guide for display selected from a
20 plurality of program guides for display.

 17. Apparatus for decoding packetized program data
 from at least a first source, comprising:
 a processor for acquiring packetized program
25 information including ancillary information and program guide
 information, said ancillary information including,
 (a) an object file comprising application software
 for use in commanding a device, and
 (b) a directory for associating said application
30 software with a program listed in said program guide information;
 and
 a processor using said ancillary information and for
 executing said application software to command said device in
 processing said listed program.

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5 18. Apparatus according to claim 17, wherein
 said application software performs at least one of the
 following functions, (a) commands a VCR/DVD device to record a
 program at a scheduled broadcast time, (b) commands said
 apparatus to tune to a particular broadcast video channel, (c)
10 commands said apparatus to tune to a particular broadcast audio
 channel.

 19. Apparatus according to claim 17, wherein
 said application software comprises at least one of, (a)
15 an HTML or SGML file, (b) a Java™ file, (c) an ActiveX™ file, (d) a
 web browser and (e) a decoder supported software language file.

 20. Apparatus according to claim 17, wherein
 said directory lists a file associated with at least one of
20 (a) a broadcast program, (b) a broadcast channel, (c) User interface
 controls, and (d) a peripheral device attached to said apparatus.

 21. Apparatus according to claim 17, wherein
 said ancillary information includes an object file
25 complexity level indicator, and
 said apparatus disregards object files of complexity
 level exceeding a predetermined level.

5 22. Apparatus for decoding packetized program data
from at least a first source to provide a program guide,
comprising:

 a processor for acquiring program guide information
and for acquiring ancillary information in said packetized program
10 data, said ancillary information including,

 (a) a directory of object files associated with
program guide information items, and

 (b) an object file complexity level indicator, and
 a processor for disregarding object files of complexity
15 level exceeding a predetermined level and for creating an image
object from an object file and linking said image object to a
program guide information item; and

 a display processor for forming a composite image
including said image object and said program guide information
20 item to provide a program guide for display.

 23. A storage medium containing digital data
representing video information comprising:

 packetized program information representing a video
25 program;

 ancillary information including information for
processing multimedia objects comprising,

 (a) a directory of object files associated with
program guide information items, and

30 (b) a map for associating said object files with
said program guide information items; and

 information for creating an image object from an
object file and linking said image object to a program guide
information item in an image for display.

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5 24. A method for decoding packetized program data
from at least a first source to provide a program guide, comprising
the steps of:

 acquiring program guide information and for acquiring
ancillary information in said packetized program data, said
10 ancillary information including,

 (a) a directory of object files associated with
program guide information items, and

 (b) a map for associating said object files with
said program guide information items;

15 creating an image object from an object file;

 linking said image object to a program guide
information item; and

 forming a composite image including said image object
and said program guide information item to provide a program
20 guide for display.

 25. A method for decoding packetized program data
from at least a first source to provide a program guide,
comprising:

25 acquiring program guide information in said
packetized program data and for acquiring ancillary information,
said ancillary information including,

 (a) application software for use in processing
acquired program guide information, and

30 (b) a directory for associating said application
software with a program guide information item to be processed,
 executing said application software to process said
program guide information item in forming a program guide for
display; and

35 conditioning said formed program guide information
for display.

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5 26. A method for decoding packetized program data from at least a first source, comprising the steps of:

 acquiring packetized program information including ancillary information and program guide information, said ancillary information including,

10 (a) an object file comprising application software for use in commanding a device, and

 (b) a directory for associating said application software with a program listed in said program guide information; and

15 using said ancillary information to determine a program for processing by a device; and

 executing said application software to command said device in processing said listed program.

20 27. A method for forming packetized program data to be suitable for processing in a decoder, comprising the steps of:

 forming program guide information and ancillary information including,

 (a) a directory of object files associated with
25 program guide information items, and

 (b) a map for associating said object files with said program guide information items;

 incorporating said ancillary information and said program guide information into packetized data for output to a
30 transmission channel.



PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA 89399	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 99/03511	International filing date (day/month/year) 18/02/1999	(Earliest) Priority Date (day/month/year) 20/02/1998
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/03511

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04N7/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 02702 A (PHILIPS ELECTRONICS NV ;PHILIPS NORDEN AB (SE)) 23 January 1997	1-4, 7-9, 11, 12, 14, 15, 17, 19, 20, 23-26 6
Y	see page 4, line 5 - line 19 see page 17, line 17 - line 23 ---	
A	COLAITIS F ET AL: "MHEG AND ITS PROFILE FOR ITV APPLICATIONS" IEE COLLOQUIUM ON INTERACTIVE TELEVISION, no. 1995/159, 2 October 1995, pages 3/1-3/08, XP000646001 see page 3, line 4 - line 7 see page 4, line 15 - line 25 see page 7, line 18 - line 24 --- -/--	1-3, 7-9, 15, 17, 19, 20, 23-27



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

3 June 1999

Date of mailing of the international search report

10/06/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Sindic, G

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/03511

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	HOFRICHTER K: "MHEG 5 - STANDARDIZED PRESENTATION OBJECTS FOR THE SET TOP UNIT ENVIRONMENT" INTERACTIVE DISTRIBUTED MULTIMEDIA SYSTEMS AND SERVICES, 4 March 1996, pages 33-44, XP000672134 see page 27, line 8 - line 13 see page 35, line 15 - line 24 see page 42, line 18 - line 29 see figure 4 ---	1,3,8,19
Y A	WO 97 30549 A (POWERTV INC) 21 August 1997 see page 7, line 6 - line 13 see page 8, line 9 - page 9, line 3 -----	6 22

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/03511

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9702702	A	23-01-1997	AU	5908996 A	05-02-1997
			BR	9606458 A	06-01-1998
			CA	2198895 A	23-01-1997
			CN	1164947 A	12-11-1997
			EP	0787407 A	06-08-1997
			JP	10505731 T	02-06-1998

WO 9730549	A	21-08-1997	AU	1693597 A	02-09-1997
			EP	0880857 A	02-12-1998

PATENT COOPERATION TREATY

MAR 9 2000

IS&S

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From the INTERNATIONAL BUREAU

To:

MAR 10 2000

TRIPOLI, Joseph, S.
Thomson Multimedia Licensing
Incorporated
P.O. Box 5312
Princeton, NJ 08540
ÉTATS-UNIS D'AMÉRIQUE

NOTIFICATION OF THE RECORDING
OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

Date of mailing (day/month/year) 25 February 2000 (25.02.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference RCA 89399	
International application No. PCT/US99/03511	International filing date (day/month/year) 18 February 1999 (18.02.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address THOMSON CONSUMER ELECTRONICS, INC. 10330 North Meridian Street Indianapolis, IN 46290 United States of America	State of Nationality US	State of Residence US
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☒ the address ☒ the nationality ☒ the residence

Name and Address THOMSON LICENSING S.A. 46, Quai A. Le Galo F-92648 Boulogne Cedex France	State of Nationality FR	State of Residence FR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer J. Leitao
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C. 20231
 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 13 September 1999 (13.09.99)	
International application No. PCT/US99/03511	Applicant's or agent's file reference RCA 89399
International filing date (day/month/year) 18 February 1999 (18.02.99)	Priority date (day/month/year) 20 February 1998 (20.02.98)
Applicant OZKAN, Mehmet, Kemal et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 11 August 1999 (11.08.99)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer F. Baechler Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

REC'D 15 MAR 2000

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 89399	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US99/03511	International filing date (day/month/year) 18/02/1999	Priority date (day/month/year) 20/02/1998
International Patent Classification (IPC) or national classification and IPC H04N7/16		
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 11/08/1999	Date of completion of this report 13.03.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Noll, B Telephone No. +49 89 2399 8700



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/03511

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

Description, pages:

1-21 as originally filed

Claims, No.:

1-27 with telefax of 18/02/2000

Drawings, sheets:

1/11-11/11 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US99/03511

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4-16,18,19,21-23,25-27
	No:	Claims	1-3,17,20, 24
Inventive step (IS)	Yes:	Claims	
	No:	Claims	4-16,18,19,21-23,25-27
Industrial applicability (IA)	Yes:	Claims	1-27
	No:	Claims	

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

To section V:

With regard to claim 1 the document WO-A-97 02702 (hereinafter referred to as D1) discloses transmission and reception of program guide information as packetized program data. The known apparatus comprises (see figure 1 and corresponding parts of the description) a processor 23, 25 for acquiring program guide and ancillary information (see figure 2 and corresponding text in the description), for creating an image object (step 43 in figure 6), and for forming a composite image including the image object and the program guide information item (step 47 in figure 6). The ancillary information received includes a directory of software application files and a map (menu section 35 in figure 2). When executing the software application files by the processor, "objects" are created (for example the graphic section 33 in figure 2; see also step 42 in figure 6) and linked to a program guide item (see for example the section menu info described on pages 8 ff. to which graphics objects can be linked as attributes). Hence all features of claim 1 are known from D1.

The additional features of claims 2 is likewise known from D1, see figure 5 and description, last paragraph on page 10 and the example described on pages 13-15. The additional feature of claim 4 is obvious from D1, see page 17, lines 17-23. The feature of claim 5 for selecting between available program guides is a mere matter of design choice. The feature of claim 6 (complexity level indicator) is obvious from the document WO-A-97 30549 (hereinafter referred to as D2; see page 7, lines 7-13) in which individual modules are associated with identifiers indicating a receiver whether or not it is capable of decoding the module.

Independent claim 7 differs from claim 1 in that the ancillary information includes application software. This is likewise known from D1, see "section programme info" on pages 11 and 12. Furthermore, the feature of claims 9 (executing program info to build display guide), 12, 15 and 16 are likewise known from D1, see passages mentioned above. The features of claims 8, 10, 11, 13 and 14 are self-evident for a skilled person or do not go beyond standard features of prior art program guide systems.

Claim 17 corresponds to claim 1 but does not mention a display processor. The above objections against claim 1 hold for the features of claim 17 for the same reasons.

The feature of claim 18 is rendered obvious by D1, see last paragraph on page 15. For

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US99/03511

claims 19-21 see the above objections against claims 8, 2 and 6, respectively.

Claim 22 substantially includes the features of claims 1 plus 6. Therefore, the above objections against claim 6 hold for claim 22 for similar reasons.

With regard to claim 23 it has been shown above that the particular video data structure containing a directory of object files and a map is known in the art. Storing such video information on a storage medium is a normal process routinely performed in the art. Hence a storage medium containing such data cannot be based on an inventive step.

Method claims 24-27 correspond to claims 1, 7, 17 and 22. The above objections against claims 1, 7, 17 and 22 hold for claims 26-27 for the same reasons.

To section VII:

Reference signs in parentheses should have been inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.

To meet the requirements of Rule 5.1(a)(ii) PCT, the documents D1 and D2 mentioned in the search report should have been identified in the description and the relevant background art disclosed therein should have been briefly discussed.

To section VIII:

The claims do not meet the requirements of Article 6 PCT for the following reasons:

Independent claims 1, 7, 17 and 22 relate to substantially same subject-matter and are therefore not concise. The same applies to corresponding method claims 23-26.

It is not clear in the claims what is the essential difference between program guide information and ancillary information. The terms "a directory of executable software application files, "objects" and "program guide information item" are vague and can be interpreted in various manners so that no clear technical limitation is imposed by them. More particularly, they do not adequately represent the hierarchical directory format depicted in figure 11 of the application.

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

TRIPOLI, Joseph S.
THOMSON MULTIMEDIA LICENSING INC.
PO Box 5312
PRINCETON, NEW JERSEY 08543
ETATS-UNIS D'AMERIQUE

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MAR 21 2000

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Applicant's or agent's file reference RCA 89399		IMPORTANT NOTIFICATION	
International application No. PCT/US99/03511	International filing date (day/month/year) 18/02/1999	Priority date (day/month/year) 20/02/1998	
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.			

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/ <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized officer Stannartz, B Tel. +49 89 2399-8242
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT



(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 89399	FOR FURTHER ACTION		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/03511	International filing date (<i>day/month/year</i>) 18/02/1999	Priority date (<i>day/month/year</i>) 20/02/1998	
International Patent Classification (IPC) or national classification and IPC H04N7/16			
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 11/08/1999	Date of completion of this report 13.03.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Noll, B Telephone No. +49 89 2399 8700 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US99/03511

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-21 as originally filed

Claims, No.:

1-27 with telefax of 18/02/2000

Drawings, sheets:

1/11-11/11 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US99/03511

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	4-16,18,19,21-23,25-27
	No:	Claims	1-3,17,20, 24
Inventive step (IS)	Yes:	Claims	
	No:	Claims	4-16,18,19,21-23,25-27
Industrial applicability (IA)	Yes:	Claims	1-27
	No:	Claims	

2. Citations and explanations

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US99/03511

To section V:

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